



| | | | | | |
|---|---------|----|--|--------------------------|--------------|
| PTO/SB/08A | | | <div style="text-align: center;">  </div> | | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Complete if Known | | |
| | | | Application Number | 09/972,608 | |
| | | | Filing Date | October 5, 2001 | |
| | | | Confirmation Number | 4591 | |
| | | | First Named Inventor | Vladimir Voronkov et al. | |
| | | | Group Art Unit | 2812 | |
| Examiner Name | Unknown | | | | |
| Sheet | 1 | of | 8 | Attorney Docket No. | 985401/23401 |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|----------------------|--------------------------------------|---|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY |
| | | Number | Kind Code ² (if known) | | |
| SSS | 1 | 4,314,595 | | Yamamoto et al. | 02/09/1982 |
| SSS | 2 | 4,981,549 | | Yamashita et al. | 01/01/1991 |
| SSS | 3 | 5,264,189 | | Yamashita et al. | 11/23/1993 |
| SSS | 4 | 5,485,803 | | Habu, R. | 01/23/1996 |
| SSS | 5 | 5,487,354 | | von Ammon et al. | 01/30/1996 |
| SSS | 6 | 5,502,010 | | Nadahara, S. et al. | 03/26/1996 |
| SSS | 7 | 5,667,584 | | Takano et al. | 09/16/1997 |
| SSS | 8 | 5,704,973 | | Sakurada et al. | 01/06/1998 |
| SSS | 9 | 5,728,211 | | Takano et al. | 03/17/1998 |
| SSS | 10 | 5,919,302 | | Falster et al. | 07/06/1999 |
| SSS | 11 | 5,935,320 | | Graef et al. | 08/10/1999 |
| SSS | 12 | 5,942,032 | | Kim et al. | 08/24/1999 |
| SSS | 13 | 5,954,873 | | Hourai et al. | 09/21/1999 |
| SSS | 14 | 5,968,262 | | Saishouji et al. | 10/19/1999 |

| | | | |
|--------------------|---|-----------------|------------|
| Examiner Signature |  | Date Considered | 12/15/2003 |
|--------------------|---|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

| | |
|----------------------|--------------------------|
| Application Number | 09/972,608 |
| Filing Date | October 5, 2001 |
| Confirmation Number | 4591 |
| First Named Inventor | Vladimir Voronkov et al. |
| Group Art Unit | 2812 |
| Examiner Name | Unknown |
| Attorney Docket No. | 985401/23401 |

| | | | |
|-------|---|----|---|
| Sheet | 2 | of | 8 |
|-------|---|----|---|

| | | | | | |
|-----|----|-----------|----|------------------|------------|
| SSS | 15 | 5,968,264 | | Iida et al. | 10/19/1999 |
| SSS | 16 | 6,045,610 | | Park et al. | 04/04/2000 |
| SSS | 17 | 6,053,974 | | Luter et al. | 04/25/2000 |
| SSS | 18 | 6,093,913 | | Schrenker et al. | 07/25/2000 |
| SSS | 19 | 6,153,008 | | von Ammon et al. | 11/28/2000 |
| SSS | 20 | 6,228,164 | B1 | von Ammon et al. | 05/08/2001 |
| SSS | 21 | 6,236,104 | B1 | Falster et al. | 05/22/2001 |

FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | T ⁶ |
|--------------------|-----------------------|-------------------------|---------------------|-----------------------------------|---|--|----------------|
| | | Office | Number ⁴ | Kind Code ² (if known) | | | |
| SSS | 22 | EP | 0 503 816 | B1 | Shin-Etsu Handotai Company Ltd. | 09/16/1992 | |
| SSS | 23 | EP | 0 504 837 | A2 | Shin-Etsu Handotai Company Ltd. | 09/23/1992 | |
| SSS | 24 | EP | 0 536 958 | A1 | Shin-Etsu Handotai Company Ltd. | 04/14/1993 | |
| SSS | 25 | EP | 0 716 168 | A1 | Shin-Etsu Handotai Company Ltd. | 12/06/1996 | |
| SSS | 26 | EP | 0 747 513 | A2 | Shin-Etsu Handotai Company Ltd. | 12/11/1996 | |
| SSS | 27 | EP | 0 890 662 | A1 | Shinetsu Handotai KK | 01/13/1999 | |
| SSS | 28 | EP | 0 909 840 | A1 | Shinetsu Handota KK | 04/21/1999 | |

| | | | |
|--------------------|----------------|-----------------|------------|
| Examiner Signature | <i>Sty L H</i> | Date Considered | 12/13/2003 |
|--------------------|----------------|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.


Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

| | | | | | |
|--|---|----|---|--------------------------|--------------------------|
| PTO/SB/06A JAN 09 2002 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 09/972,608 |
| | | | | Filing Date | October 5, 2001 |
| | | | | Confirmation Number | 4591 |
| | | | | First Named Inventor | Vladimir Voronkov et al. |
| | | | | Group Art Unit | 2812 |
| | | | | Examiner Name | Unknown |
| Sheet | 3 | of | 8 | Attorney Docket No. | 985401/23401 |

| | | | |
|-----------------------|---|--------------------|------------|
| Examiner Signature |  | Date Considered | 12/15/2003 |
|-----------------------|---|--------------------|------------|

¹Unique citation designation number. ²See *Changed Kinds of U.S. Patent Documents*. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

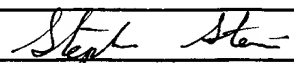
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.**

| | | | | | |
|---|---|----|---|--|--------------------------|
| PTO/SB/08A | | | | <div style="text-align: center;">  </div> | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 09/972,608 |
| | | | | Filing Date | October 5, 2001 |
| | | | | Confirmation Number | 4591 |
| | | | | First Named Inventor | Vladimir Voronkov et al. |
| | | | | Group Art Unit | 2812 |
| | | | | Examiner Name | Unknown |
| Sheet | 4 | of | 8 | Attorney Docket No. 985401/23401 | |

| | | | | | | | |
|-----|----|-----|--------------|----|--------------------------------|------------|--|
| SSS | 47 | PCT | WO 01/21861 | A1 | MEMC Electronic Materials Inc. | 03/29/2001 | |
| SSS | 48 | PCT | WO 01/21864 | A1 | MEMC Electronic Materials Inc. | 03/29/2001 | |
| SSS | 49 | PCT | WO 01/21865 | A1 | MEMC Electronic Materials Inc. | 03/29/2001 | |
| SSS | 50 | UK | GB 2 137 524 | A | Hitachi Ltd. (Japan) | 10/10/1984 | |
| SSS | 51 | UK | GB 2 182 262 | A | Sony Corp. | 05/13/1987 | |

OTHER ART - NON PATENT LITERATURE DOCUMENTS


| Examiner initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
|--------------------|-----------------------|--|----------------|
| SSS | 52 | ABE, T., et al., "Behavior of Point Defects in FZ Silicon Crystals", Semiconductor Silicon 1990, <i>Proceedings of the Sixth International Symposium on Silicon Materials Science and Technology</i> , Vol. 90-7 (1990), pp. 105-116 | |
| SSS | 53 | ABE, T., "The formation mechanism of grown-in defects in CZ silicon crystals based on thermal gradients measured by thermocouples near growth interfaces", <i>Materials Science and Engineering</i> , Vol. B73 (2000), pp.16-29 | |
| SSS | 54 | von AMMON, W., et al. "The Dependence of bulk defects on the axial temperature gradient of silicon crystals during Czochralski growth" <i>Journal of Crystal Growth</i> , Vol. 151 (1995) pp. 273-277 | |
| SSS | 55 | von AMMON, W., et al. "Bulk properties of very large diameter silicon single crystals" <i>Journal of Crystal Growth</i> , Vol. 198/199, (1999), pp. 390-398 | |
| SSS | 56 | DORNBERGER, E., et al., "The Impact of Dwell Time Above 900°C During Crystal Growth on the Gate Oxide Integrity of Silicon Wafers", <i>Electrochemical Society Proceedings</i> , Vol. 96, No. 13, pp. 140-151 | |

| | | | |
|--------------------|---|-----------------|------------|
| Examiner Signature |  | Date Considered | 12/15/2003 |
|--------------------|---|-----------------|------------|

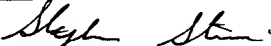
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

| | | | | | |
|---|---------|----|---|---|--------------------------|
| PTO/SB/08A | | | |  | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 09/972,608 |
| | | | | Filing Date | October 5, 2001 |
| | | | | Confirmation Number | 4591 |
| | | | | First Named Inventor | Vladimir Voronkov et al. |
| | | | | Group Art Unit | 2812 |
| Examiner Name | Unknown | | | | |
| Sheet | 5 | of | 8 | Attorney Docket No. | 985401/23401 |


| | | | |
|-----|----|---|--|
| SSS | 57 | DORNBERGER, E., et al., "The Dependence of Ring Like Distributed Stacking Faults on the Axial Temperature Gradient of Growing Czochralski Silicon Crystals" Electrochemical Society Proceedings, Volume 95-4, (5/1995) pp. 294-305 | |
| SSS | 58 | DORNBERGER, E., et al., "Simulation of Grown-In Voids in Czochralski Silicon Crystals", Electrochemical Society Proceedings, Vol. 97-22, pp. 40-49 | |
| SSS | 59 | DORNBERGER, E., et al., "Simulation of Non-Uniform Grown-In Void Distributions in Czochralski Silicon Crystals", Electrochemical Society Proceedings, Vol. 98, Vol. 1, pp. 490-503 | |
| SSS | 60 | EIDENZON, A.M., et al., "Defect-Free Silicon Crystals Grown By The Czochralski Technique"; Inorganic Materials, Vol. 33, No. 3, (1997) pp. 219-225. | |
| SSS | 61 | EIDENZON, A.M., et al., "Influence Of Growth Rate On Swirl Defects In Large Dislocation-Free Crystals Of Silicon Grown By The Czochralski Method", Sov. Phys. Crystallogr.; Vol. 30, No. 5 (1985) pp. 576-580. | |
| SSS | 62 | FALSTER, R., et al., "Intrinsic Point Defects and Their Control In Silicon Crystal Growth and Wafer Processing", MRS Bulletin, Vol. 25, No. 6 (June 2000), pp.28-32 | |
| SSS | 63 | FOLL, H., et al. "The Formation of Swirl Defects in Silicon by Agglomeration of Self-Interstitials", Journal of Crystal Growth, 1977, pp. 90-1087, Vol. 40, North-Holland Publishing Company | |
| SSS | 64 | HOURAI, M., et al., "Improvement of Gate Oxide Integrity Characteristics of CZ-Grown Silicon Crystals", Progress in Semiconductor Fabrication presented by: Semiconductor Equipment and Materials International, Semicon/Europa 93, March 30-April 1, 1993, Geneva, Switzerland | |
| SSS | 65 | HOURAI, M., et al. "Growth Parameters Determining the Type of Grown-In Defects in Czochralski Silicon Crystals", Materials Science Forum, Vols. 198-201 (1995) pp. 1713-1718 | |
| SSS | 66 | KISSINGER, G., et al. "A Method for Studying the Grown-In Defect Density Spectra in Czochralski Silicon Wafers" Journal of Electrochemical Society, Vol. 144, No. 4, (1997) pp. 1447-1456 | |

| | | | |
|--------------------|---|-----------------|------------|
| Examiner Signature |  | Date Considered | 12/15/2003 |
|--------------------|---|-----------------|------------|

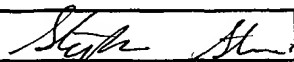
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*Unique citation designation number. *See attached Kinds of U.S. Patent Documents. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

| | | | | | | |
|---|---|----|---|--------------------------|--------------------------|--|
| PTO/SB/08A | | |  | | Complete if Known | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Application Number | 09/972,608 | | |
| | | | Filing Date | October 5, 2001 | | |
| | | | Confirmation Number | 4591 | | |
| | | | First Named Inventor | Vladimir Voronkov et al. | | |
| | | | Group Art Unit | 2812 | | |
| | | | Examiner Name | Unknown | | |
| Sheet | 6 | of | 8 | Attorney Docket No. | 985401/23401 | |

| | | | |
|-----|----|---|---|
| SSS | 67 | de KOCK, A.J.R., "The Elimination of Vacancy-Cluster Formation in Dislocation-Free Silicon Crystals", J. of the Electrochem. Soc.: SOLID-STATE SCIENCE AND TECHNOLOGY, Vol. 118, No. 11, (Nov. 1971), pp.1851-1856 | |
| SSS | 68 | de KOCK, A.J.R., et al., "Effect of Growth Parameters on Formation and Elimination of Vacancy Clusters in Dislocation-Free Silicon Crystals", Journal of Crystal Growth, Vol. 22 (1974), pp. 311-320 | |
| SSS | 69 | de KOCK, A.J.R., et al., "The Effect of Doping on the Formation of Swirl Defects in Dislocation-Free Czochralski-Grown Silicon Crystals", Journal of Crystal Growth, Vol. 49, (1980) pp. 718-734 | |
| SSS | 70 | LEMKE, H., et al., "Analytical Approximations for the Distributions of Intrinsic Point Defects in Grown Silicon Crystals", Phys. Stat. Sol. (a) Vol. 176 (1999), pp. 843-865 | |
| SSS | 71 | NAKAMURA, K., et al., "Formation Process of Grown-In Defects in Czochralski Grown Silicon Crystals", Journal of Crystal Growth, Vol. 180, (1997) pp. 61-72 | |
| SSS | 72 | PARK, J.G., et al., "Effect of Crystal Defects on Device Characteristics", <i>Proceedings of the Symposium on Crystalline Defects and Contamination: Their Impact And Control In Device Manufacturing II</i> , Proceed. Vol. 97-22 (1997), pp.173-195 | |
| SSS | 73 | PUZANOV, N.I., et al., "Influence of Transitional Crystallization Regimes on Microdefects In Silicon", USSR Academy of Sciences Newsletter, Vol. 22, No. 8 (1986), pp.1237-1242 | X |
| SSS | 74 | PUZANOV, N.I., et al., "Relaxation In A System Of Point Defects In A Growing Dislocation-Free Crystal Of Silicon", Sov. Phys. Crystallogr., Vol. 31, No. 2, (1986) pp. 219-222. | |
| SSS | 75 | PUZANOV, N.I., et al., "The effect of thermal history during crystal growth on oxygen precipitation in Czochralski-grown silicon", Semicond. Sci. Technol., Vol. 7, (1992), pp. 406-413 | |
| SSS | 76 | PUZANOV, N.I., et al., "Formation of the bands of anomalous oxygen precipitation in Czochralski-grown Si crystals" Journal of Crystal Growth vol. 137, (1994), pp. 642-652 | |
| SSS | 77 | PUZANOV, N.I., et al., "The Role of Intrinsic Point Defects In the Formation of Oxygen Precipitation Centers in Dislocation-Free Silicon" Crystallography Reports, Vol. 41, No. 1, (1996), pp. 134-141 | |

| | | | |
|--------------------|---|-----------------|------------|
| Examiner Signature |  | Date Considered | 12/15/2003 |
|--------------------|---|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

| | | | | | |
|----------------------|--------------------------|----|---|---------------------|--------------|
| Application Number | 09/972,608 | | | | |
| Filing Date | October 5, 2001 | | | | |
| Confirmation Number | 4591 | | | | |
| First Named Inventor | Vladimir Voronkov et al. | | | | |
| Group Art Unit | 2812 | | | | |
| Examiner Name | Unknown | | | | |
| Sheet | 7 | of | 8 | Attorney Docket No. | 985401/23401 |

| | | | |
|-----|----|--|---|
| 500 | 78 | PUZANOV, N.I., et al., "Cultivation, Morphology and Structural Integrity of Dislocation-Free Silicon Tetracrystals", Inorganic Materials, Vol. 32, No. 8 (1996), pp. 903-912 | X |
| 501 | 79 | PUZANOV, N.I., et al., "Harmful Microdefects in the Seed-End Portion of Large-Diameter Silicon Ingots", Inorganic Materials, Vol. 33, No. 8, (1997) pp. 765-769 | |
| 503 | 80 | PUZANOV, N.I., et al., "Modelling microdefect distribution in dislocation-free Si crystals grown from the melt", Journal of Crystal Growth, 178, (1997), pp. 468-478 | |
| 505 | 81 | PUZANOV, N.I., et al., "Role of Vacancies in the Nucleation of Ringlike-patterned Oxidation-Induced Stacking Faults in Melt-grown Silicon Crystals" Inorganic Materials, Vol. 34-4, (1998) pp. 307-314 | |
| 507 | 82 | ROKSNOER, P.J., "Microdefects in a Non-Striated Distribution in Floating-Zone Silicon Crystals", Journal of Crystal Growth, Vol. 53 (1981), pp. 563-573 | |
| 509 | 83 | ROKSNOER, P.J., "The Mechanism of Formation of Microdefects in Silicon", Journal of Crystal Growth, Vol. 68 (1984), pp. 596-612 | |
| 511 | 84 | SHIMANUKI, Y., et al., "Effects of Thermal History on Microdefect Formation in Czochralski Silicon Crystals", Japanese Journal of Applied Physics, Vol. 24, No. 12, (1985), pp. 1594-1599 | |
| 513 | 85 | SINNO, T., et al., "On the Dynamics of the Oxidation-Induced Stacking-Fault Ring in as-grown Czochralski silicon crystals", Applied Physics Letters, Vol. 70, No. 17, (1997) pp. 2250-2252 | |
| 515 | 86 | SINNO, T., et al., "Point Defect Dynamics and the Oxidation-Induced Stacking-Fault Ring in Czochralski-Grown Silicon Crystals", J. Electrochem. Soc., Vol. 145, No. 1, (1998) pp. 302-318 | |
| 517 | 87 | TAN, T. Y., "Point Defects, Diffusion Processes, and Swirl Defect Formation in Silicon", Appl. Phys. A., Vol. 37, (1985) pp. 1-17 | |
| 519 | 88 | VANHELLEMONT, J., et al., "Defects in As-Grown Silicon and Their Evolution During Heat Treatments", Materials Science Forum, Vols. 258-263, (1997) pp. 341-346 | |
| 521 | 89 | VORONKOV, V., "The Mechanism of Swirl Defects Formation in Silicon", Journal of Crystal Growth, Vol. 59 (1982) pp. 625-643. | |

Examiner
Signature

Date
Considered

12/15/2003

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A

**INFORMATION DISCLOSURE
STATEMENT OF APPLICANT**

(use as many sheets as necessary)

Complete if Known

| | |
|----------------------|--------------------------|
| Application Number | 09/972,608 |
| Filing Date | October 5, 2001 |
| Confirmation Number | 4591 |
| First Named Inventor | Vladimir Voronkov et al. |
| Group Art Unit | 2812 |
| Examiner Name | Unknown |
| Attorney Docket No. | 985401/23401 |

| | | | |
|-------|---|----|---|
| Sheet | 8 | of | 8 |
|-------|---|----|---|

| | | | |
|-----|----|--|--|
| SSS | 90 | VORONKOV, V., et al., "Behaviour and Effects of Intrinsic Point Defects in the Growth of Large Silicon Crystals", Electrochemical Society proceedings, Volume 97-22, (8/1997), pp. 3-17 | |
| SSS | 91 | WIJARANAKULA, W., "Numerical Modeling of the Point Defect Aggregation during the Czochralski Silicon Crystal Growth", Journal of Electrochemical Society, Vol. 139, No. 2 (Feb. 1992), pp.604-616 | |
| SSS | 92 | WINKLER, R., et al. "Improvement of the Gate Oxide Integrity by Modifying Crystal Pulling and Its Impact on Device Failures" Journal of the Electrochemical Society, Vol. 141, No. 5 (5/1994) pp. 1398-1401. | |
| SSS | 93 | ZIMMERMAN, H., et al. "Gold and Platinum Diffusion: the Key to the Understanding of Intrinsic Point Defect Behavior in Silicon", Applied Physics A Solids and Surfaces, Vol. A55, No. 1 (1992) pp. 121-134 | |
| SSS | 94 | ZIMMERMAN, H., et al. "Vacancy concentration wafer mapping in silicon" Journal of Crystal Growth, Vol. 129, (1993) pp. 582-592. | |

| | | | |
|--------------------|------------------|-----------------|------------|
| Examiner Signature | <i>Steph Ste</i> | Date Considered | 12/15/2003 |
|--------------------|------------------|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.